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METHOD AND SYSTEM FOR IMPLEMENTING A DIAGNOSTIC OR CORRECITON BOOT IMAGE OVER A NETWORK CONNECTION

TECHNICAL FIELD OF THE INVENTION

The present invention relates to implementing specific bootable operating system (OS) images to a network connected computing device. In particular the invention relates to directing the reboot of a computing device using a boot image that diagnoses or corrects defects from a remote location.

Background of the Invention

In many typical networked computing devices, a remote administrator has no means to perform automatic client hardware maintenance without touching the client machine. These tasks include flashing a BIOS, or boot sector repair for computing devices.

Some network machines can have maintenance performed remotely from a server, or may have control taken from them remotely. However, the remote nature of the operation is typically only done while still running under a typical boot image. Thus, some maintenance functions cannot be performed through this remote action.

Other problems may include the remote diagnostics of machines, and such diagnostics require the operation of the machine apart from the typical boot image. Again, these actions can only take place at the client machine.

These problems may include the deterioration of physical parts of electromagnetic storage media associated with them. When this happens, an that operates on any of them may not be able to handle the proper correction techniques associated with that problem. Alternatively, the systems themselves may lack the requisite capacity even to determine if any inherent problems exist or are about to happen.

In this manner, the typical prior art does not allow for flexible processing schedules along with dealing with ever-changing security rejection issues. Many other problems and disadvantages of the prior art will become apparent to one skilled in the art after comparing such prior art with the present invention as described herein.

SUMMARY OF THE INVENTION

Aspects of the invention are found in a system that aids in the diagnostic and maintenance functions of remote computing devices. The remote computing devices are coupled to a network and run under a boot image.

The system contains some initiation mechanism, which allows for the selection of a particular remote computing device. The initiation mechanism may be user interface software, where a human operator can select the particular remote computing device. Additionally, the initiation mechanism may be a remote diagnostic program that initiates the system when performance criteria of the target systems hit a predetermined threshold.

Further, the initiator may be some temporal based function, such that an administrator may selectively operate the system through predetermined controls. An example may be a ※chron※ command in a UNIX-type operating system, or through scheduling functions in a stand alone maintenance manager. In these cases, the administrator may set up a schedule to run the system based on temporal or other considerations.

In any case, when a particular remote computing device is selected, a particular different boot image is also selected. The boot image may be selected from one or more images, and these images may be stored remotely or local relative to the system.

In any case, the system directs the new boot image to the particular remote computing device. At the completion of the download, the remote computing device is primed for rebooting under the new boot image.

The remote computing device is rebooted, and the new maintenance boot image runs on the remote computing